

ABSTRACT OF THE DISCLOSURE

A Heterojunction Bipolar Transistor, HBT, (100) containing a collector layer (104), a base layer (105) and an emitter layer (106) is constructed such that the collector layer (104), the base layer (105) and the emitter layer (106) have different lattice constants of a_c , a_b and a_e respectively, and a value of a_b between values of a_c and a_e (in other words, the values of a_c , a_b and a_e satisfy a relationship of $a_c > a_b > a_e$ or $a_c < a_b < a_e$). According to the present invention, the HBT having a high reliability can be realized without altering the existing apparatus and steps for producing the HBT extensively.